



SPEC® CFP2006 Result

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Dell Inc.

SPECfp®2006 = 16.9

Dell Precision 690 (Intel Xeon X5365, 3.00 GHz)

SPECfp_base2006 = 16.5

CPU2006 license: 55

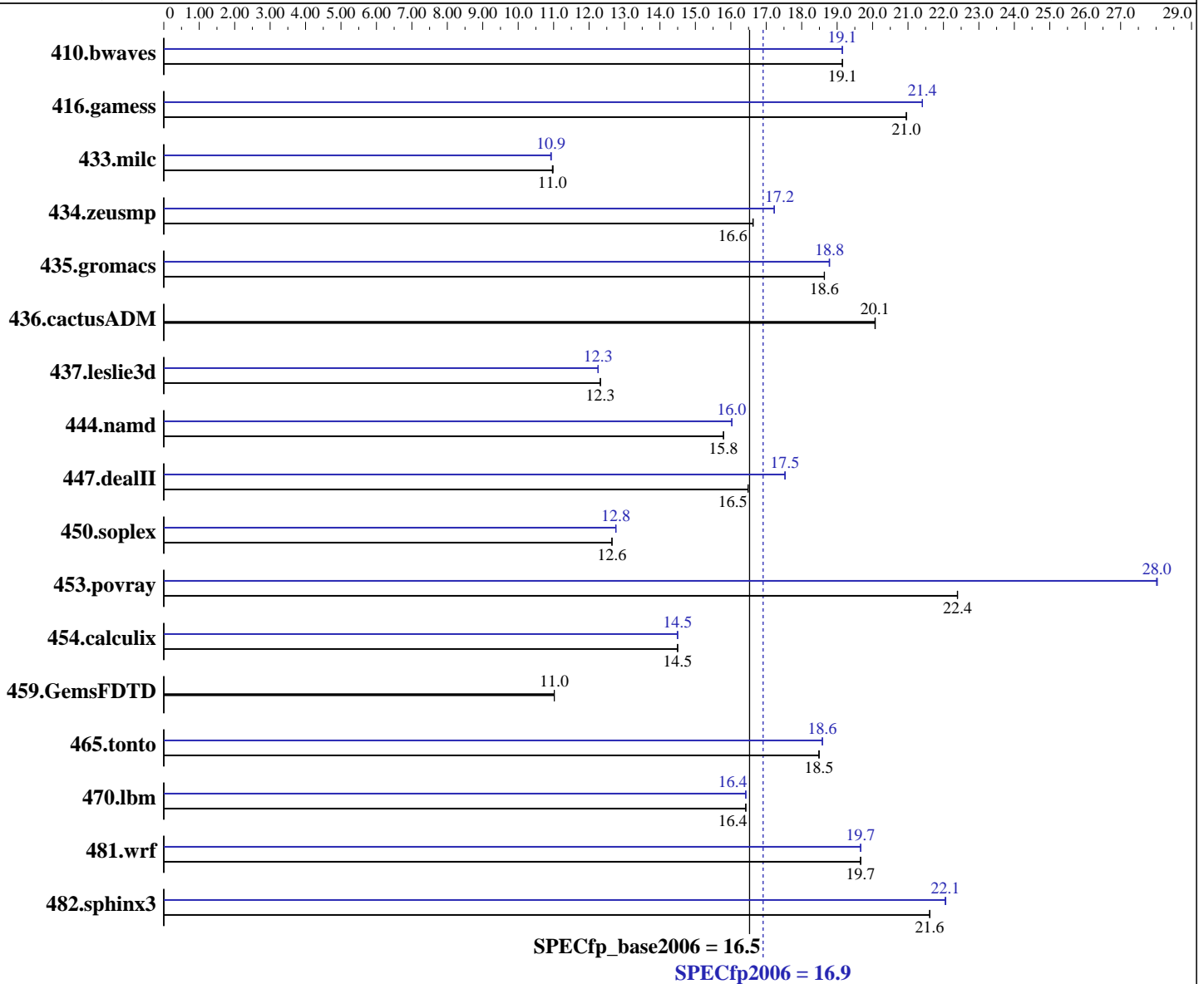
Test date: Jul-2007

Test sponsor: Dell Inc.

Hardware Availability: Aug-2007

Tested by: Dell Inc.

Software Availability: Jun-2007



Hardware

CPU Name: Intel Xeon X5365
 CPU Characteristics: 1333 MHz Bus Speed
 CPU MHz: 3000
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
 CPU(s) orderable: 1,2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 8 MB I+D on chip per chip, 4 MB shared / 2 cores

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Software

Operating System: Windows XP Professional x64 Edition SP2
 Compiler: Intel C++ Compiler for Intel 64, Version 10.0
 Build 20070426 Package ID: W_CC_P_10.0.025
 Intel Visual Fortran Compiler for Intel 64,
 Version 10.0
 Build 20070426 Package ID: W_FC_P_10.0.025
 Microsoft Visual Studio 2005 SP1

Auto Parallel: No
 File System: NTFS

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L3 Cache: None
 Other Cache: None
 Memory: 16 GB (8x2 GB 667 MHz ECC CL5 FB-DIMM)
 Disk Subsystem: 1 x 73GB SAS 10K RPM
 Other Hardware: None

System State: Default
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: MicroQuill SmartHeap Library 8.0 for x64

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	<u>710</u>	<u>19.1</u>	710	19.2	710	19.1	710	19.1	710	19.2	<u>710</u>	<u>19.1</u>
416.gamess	<u>934</u>	<u>21.0</u>	935	21.0	934	21.0	<u>915</u>	<u>21.4</u>	915	21.4	915	21.4
433.milc	836	11.0	<u>837</u>	<u>11.0</u>	837	11.0	<u>840</u>	<u>10.9</u>	839	10.9	841	10.9
434.zeusmp	<u>547</u>	<u>16.6</u>	547	16.6	548	16.6	<u>528</u>	<u>17.2</u>	528	17.2	528	17.2
435.gromacs	<u>383</u>	<u>18.6</u>	383	18.6	383	18.6	<u>380</u>	<u>18.8</u>	380	18.8	380	18.8
436.cactusADM	595	20.1	<u>595</u>	<u>20.1</u>	596	20.1	595	20.1	<u>595</u>	<u>20.1</u>	596	20.1
437.leslie3d	<u>763</u>	<u>12.3</u>	763	12.3	763	12.3	<u>767</u>	<u>12.3</u>	767	12.3	767	12.3
444.namd	508	15.8	508	15.8	<u>508</u>	<u>15.8</u>	500	16.0	<u>500</u>	<u>16.0</u>	500	16.0
447.dealII	<u>694</u>	<u>16.5</u>	694	16.5	694	16.5	<u>653</u>	<u>17.5</u>	652	17.5	653	17.5
450.soplex	660	12.6	659	12.6	<u>660</u>	<u>12.6</u>	<u>654</u>	<u>12.8</u>	654	12.8	654	12.8
453.povray	237	22.4	<u>238</u>	<u>22.4</u>	238	22.4	190	28.0	<u>190</u>	<u>28.0</u>	190	28.0
454.calculix	<u>569</u>	<u>14.5</u>	569	14.5	569	14.5	569	14.5	569	14.5	<u>569</u>	<u>14.5</u>
459.GemsFDTD	<u>963</u>	<u>11.0</u>	963	11.0	963	11.0	<u>963</u>	<u>11.0</u>	963	11.0	963	11.0
465.tonto	532	18.5	532	18.5	<u>532</u>	<u>18.5</u>	529	18.6	530	18.6	<u>529</u>	<u>18.6</u>
470.lbm	<u>837</u>	<u>16.4</u>	837	16.4	837	16.4	<u>837</u>	<u>16.4</u>	837	16.4	837	16.4
481.wrf	568	19.7	568	19.7	<u>568</u>	<u>19.7</u>	<u>568</u>	<u>19.7</u>	568	19.7	568	19.7
482.sphinx3	902	21.6	<u>902</u>	<u>21.6</u>	902	21.6	<u>884</u>	<u>22.1</u>	883	22.1	884	22.0

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

General Notes

Binaries were built on Windows Vista Ultimate (64-bit)

BIOS Settings

Snoop Filter : OFF
 Adjacent Cache Line Prefetch : ON
 Hardware Prefetcher : ON

Snoop Filter

Preserves cache coherency while minimizing snoops to remote nodes.

Adjacent Cache Line Prefetch

Prefetch data in order to shorten execution cycles and maximize data processing efficiency.



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Base Compiler Invocation

C benchmarks:
icl -Qstd=c99

C++ benchmarks:
icl

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qstd=c99 ifort

Base Portability Flags

410.bwaves: -DSPEC_CPU_P64
 416.gamess: -DSPEC_CPU_P64
 433.milc: -D_Complex= -DSPEC_CPU_P64
 434.zeusmp: -DSPEC_CPU_P64
 435.gromacs: -D_Complex= -DSPEC_CPU_P64
 436.cactusADM: -D_Complex= -DSPEC_CPU_P64 -Qlowercase /assume:underscore
 437.leslie3d: -DSPEC_CPU_P64
 444.namd: -DSPEC_CPU_P64 /TP
 447.dealII: -D_Complex= -DSPEC_CPU_P64 -DBOOST_NO_INTRINSIC_WCHAR_T
 -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
 450.soplex: -DSPEC_CPU_P64
 453.povray: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
 454.calculix: -D_Complex= -DSPEC_CPU_P64 -DSPEC_CPU_NOZMODIFIER
 -Qlowercase
 459.GemsFDTD: -DSPEC_CPU_P64
 465.tonto: -DSPEC_CPU_P64
 470.lbm: -D_Complex= -DSPEC_CPU_P64
 481.wrf: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
 482.sphinx3: -D_Complex= -DSPEC_CPU_P64

Base Optimization Flags

C benchmarks:
-fast -Qauto_ilp32 /F950000000 shlW64M.lib
-link /FORCE:MULTIPLE

C++ benchmarks:
-fast -Qcxx_features -Qauto_ilp32 /F950000000 shlW64M.lib
-link /FORCE:MULTIPLE

Fortran benchmarks:
-fast /F950000000 -link /FORCE:MULTIPLE

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Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:

-fast -Qauto_ilp32 /F950000000 -link /FORCE:MULTIPLE

Peak Compiler Invocation

C benchmarks:

icl -Qstd=c99

C++ benchmarks:

icl

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icl -Qstd=c99 ifort

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qunroll2 -Oa -Qauto_ilp32 /F950000000 sh1W64M.lib
-link /FORCE:MULTIPLE

470.lbm: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qunroll2 -Qscalar-rep- -Qprefetch -Qauto_ilp32
/F950000000 sh1W64M.lib -link /FORCE:MULTIPLE

482.sphinx3: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qunroll2 -Qauto_ilp32 /F950000000 sh1W64M.lib
-link /FORCE:MULTIPLE

C++ benchmarks:

444.namd: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Oa
-Qcxx_features -Qauto_ilp32 /F950000000 sh1W64M.lib
-link /FORCE:MULTIPLE

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Peak Optimization Flags (Continued)

447.dealII: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qprefetch -Qcxx_features -Qauto_ilp32 /F950000000
shlW64M.lib -link /FORCE:MULTIPLE

450.soplex: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qcxx_features -Qauto_ilp32 /F950000000 shlW64M.lib
-link /FORCE:MULTIPLE

453.povray: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qansi-alias -Qcxx_features -Qauto_ilp32 /F950000000
shlW64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: ONESTEP -fast /F950000000 -link /FORCE:MULTIPLE

416.gamess: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qunroll2 -Ob0 -Qansi-alias -Qscalar-rep- /F950000000
-link /FORCE:MULTIPLE

434.zeusmp: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -QxT -O2
-Qprec-div- -Qunroll10 -Qscalar-rep- /F950000000
-link /FORCE:MULTIPLE

437.leslie3d: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
/F950000000 -link /FORCE:MULTIPLE

459.GemsFDTD: basepeak = yes

465.tonto: Same as 437.leslie3d

Benchmarks using both Fortran and C:

435.gromacs: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Oa
-Qauto_ilp32 /F950000000 -link /FORCE:MULTIPLE

436.cactusADM: basepeak = yes

454.calculix: -fast -Qauto_ilp32 /F950000000
-link /FORCE:MULTIPLE

481.wrf: Same as 454.calculix

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/dell.ic10.windows.flags.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/dell.ic10.windows.flags.xml>



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